ICAO UNITING AVIATION

Partnerships and other practical measures to manage the risk of disease transmission through air travel

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Overview

- Introduction to ICAO
- Overview of CAPSCA
- Aviation/ Public Health interface
- Partnerships, practical measures and tools
- ICAO public health projects

Take – home message: This is a complicated issue, involving experts in different specialties which cannot be addressed in silo's – it needs multi-sector multi-partner collaboration, building an effective network, sharing of information, applying best-practices, regular scheduled meetings and joint practical exercises

Introduction to ICAO

- Chicago Convention in 1944
- An independent organization ("specialized agency") of the United Nations
- Promote the safe and orderly development of international civil aviation
- Development of Standards, Recommended Practices and guidance material
- Assistance with implementation
- Coordination of global aviation initiatives
- Coordination and implementation of international legal instruments

192 Contracting States

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SARPs, guidance material & implementation support

Needs Analysis / Validation

Global Plans

Global & Regional

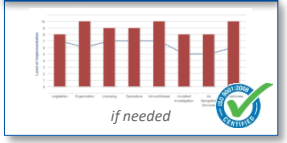
SARPs & PANS

Implementation Planning

Training & Guidance

Assess & Measure

Compliance & Verification



if needed

MANUALS

CIRCULARS

SYMPOSIA

REGIONAL IMPLEMENTATION

- RASGs for Safety
- PIRGs for Air Navigation

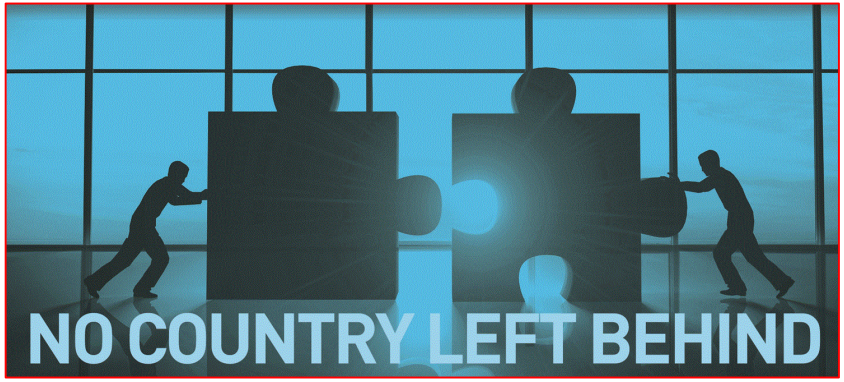
- RSOOs
- COSCAPs
- RAIOs
- FPPs

IMPLEMENTATION KITS (iKITs)

Communicable disease in ICAO

- Article 14 of the Chicago Convention

- ‘Each contracting State agrees to take effective measures to prevent the spread by means of air navigation of cholera, typhus (epidemic), smallpox, yellow fever, plague, and such other communicable diseases as the contracting States shall from time to time decide to designate….



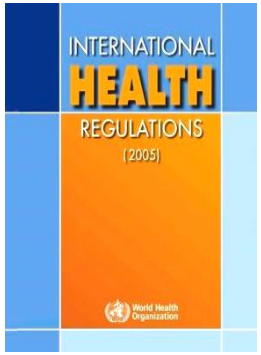
Technical Assistance & Cooperation

CAPSCA

Training Programmes

Understanding CAPSCA

- Collaborative Arrangement for the Prevention & Management of Public Health Events in Civil Aviation
- Initial focus – prevention of transmission of communicable diseases
- Scope expanded to other public health emergencies – e.g. radiation, chemical events, environmental disasters etc.
- Objectives:
  - Assist States with implementation of ICAO SARPs & WHO International Health Regulations
  - Sustainability of travel, trade & tourism
  - Additional responsibility toward passenger (end-user) and aviation personnel (occupational exposure)



CAPSCA Framework

International

- IHR
- SARPs - Annexes 6,9,11,14,18 & PANS-ATM (ICAO audit)
- Global Health Security & Sendai Framework for Disaster Risk Reduction

National

- Public Health Emergency Contingency Plan
- National Aviation Regulations with standards related to public health
- National Aviation Plan for a Public Health Emergency
- Airport (Point of Entry) Public Health Emergency Contingency Plan

Aviation

- Aerodrome Emergency Plan and Aerodrome Manual (including public health emergencies)
- Air Traffic Services (ATS) contingency plan (including public health emergencies)
- Aircraft Operators Procedures for notification and management of suspected public health risk on board an aircraft
- Airline Emergency Response Plan (including public health emergencies)
- Business Continuity Plans and Procedures for Airports, Airlines & Air Navigation Service Providers

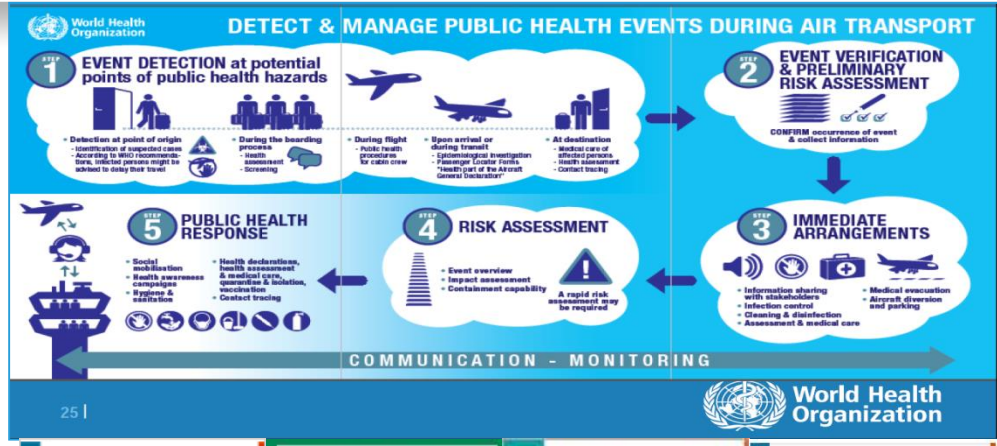
CAPSCA activities

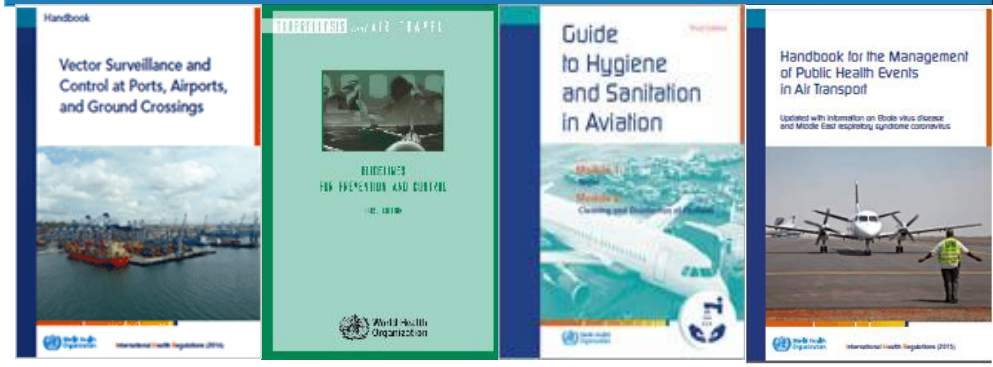
- Guidance and tools to States and stakeholders
- Assistance Visits to States and Airports
- Meetings, Seminars & Workshops
- Training workshops and exercises
- On-line training course
- CAPSCA focal point
- Web site reference information source
- Consultation and needs analysis
- Working Group

Established	2006	2007	2009	2011	2011
WHO partner	WPRO, SEARO	AFRO	AMRO/ PAHO	EURO	EMRO
ICAO states	38	48	34	56	15
CAPSCA	23	34	34	23	12
Regional meeting	Nov 2017	July 2017	To be determined	July 2017	Feb 2017

ICAO/ WHO Collaboration

- Meetings and consultation
  - Mapping the spread of VBD by international travel
  - Disinsection methods
- Sharing of information
- Joint missions - CAPSCA & JEE
- Collaboration on publications and emergency communication
- Training
  - On-line CAPSCA training
  - Public health event management in the aviation sector





Partners for collaboration

ICAO AVIATION MEDICAL FORUM

ICAO

IATA

ACI

ITF

Others

Agencies

- WHO
- ICAO
- CDC
- ECDC
- Other United Nations
- Inter-governmental

States

- Dpt. Health
- Dpt. Transport
- Immigration
- Security
- Travel & Tourism
- Military

Aviation & Medical

- Aviation
- Aviation Medicine
- Public Health
- Other specialties
- Organizations & Societies
- Air ambulance

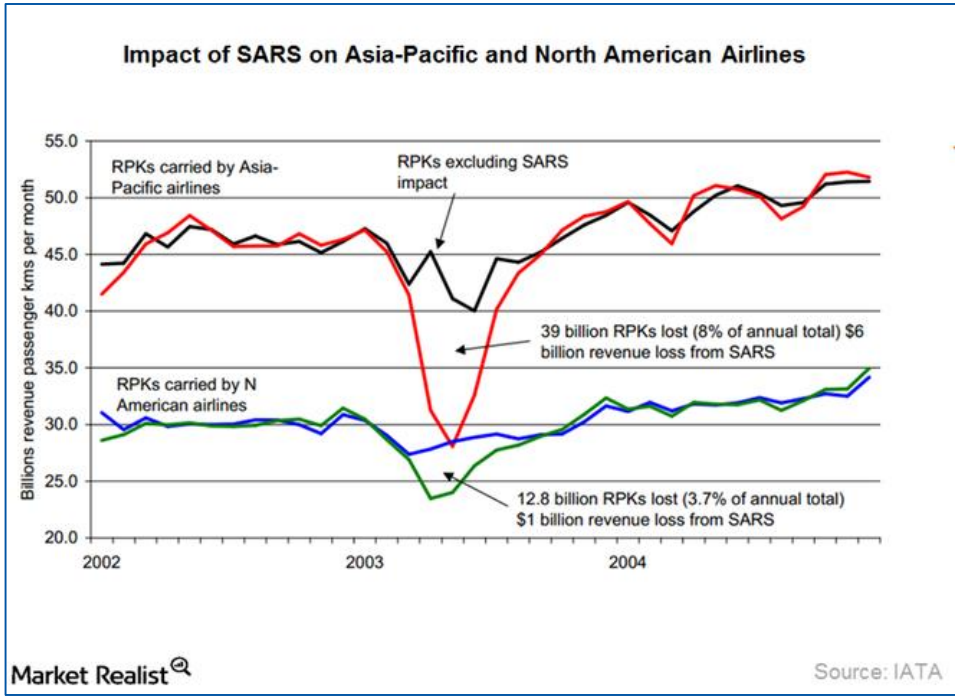
Other

- Universities
- Research institutions
- Training Organizations
- Commercial business
- Media

Aviation/ Public Health Interface

- Aviation assists public health authorities
  - Provide information to manage the event
  - Prevent transmission of disease
  - Manage illness in airport or on board aircraft
  - Maintain transport links to manage the event
  - Screening, quarantine and contact tracing
  - Air ambulance transport

- Public health events affects aviation transport
  - Absence of safety critical personnel = an aviation safety risk
  - Additional administrative burdens
  - Additional technical requirements
  - Flight delays, re-scheduling, restrictions, cancellations



Airport measures (IHR and SARPS)

- Aerodrome Emergency Plan (include Public Health events)
- Notification to the public health authority at destination (PANS-ATM)
- Information about travellers itinerary, destination
- Inspection of baggage, cargo, containers, conveyances, goods, postal parcels and human remains
- Vector control
- Joint training
- Joint exercises
- Meetings

APPENDIX 4. CERTIFICATE OF RESIDUAL DISINSECTION

GOVERNMENT OF .....

CERTIFICATE OF RESIDUAL DISINSECTION

Interior surfaces, including cargo space, of this aircraft . . . . . were treated with an approved residual
(aircraft registration)
disinsection product on . . . . . in accordance with the World Health Organization recommendations (WHO Weekly
(date)
Epidemiological Record No. 7, 1985, p. 47; No. 12, 1985, p. 90; No. 45, 1985, pp. 345-346; and No. 44, 1987, pp. 335-336) and any amendments thereto.

The treatment must be renewed if cleaning or other operations remove a significant amount of the residual disinsection product, and in any case within 8 weeks of the above date.

Expiry date: .....

Signed: .....

Designation: .....

Date: .....

Declaration of Health

Name and seat number or function of persons on board with illnesses other than airsickness or the effects of accidents, who may be suffering from a communicable disease (a fever — temperature 38 °C/100 °F or greater — associated with one or more of the following signs or symptoms, e.g. appearing obviously unwell; persistent coughing; impaired breathing; persistent diarrhoea; persistent vomiting; skin rash; bruising or bleeding without previous injury; or confusion of recent onset, increases the likelihood that the person is suffering a communicable disease) as well as such cases of illness disembarked during a previous stop .....

.....

Details of each disinsecting or sanitary treatment (place, date, time, method) during the flight. If no disinsecting has been carried out during the flight, give details of most recent disinsecting .....

.....

Signed, if required, with time and date _____

Crew member concerned

Airport measures (IHR and SARPS)

- Access to medical services and transport
- Traveller screening (entry or exit) & non-invasive medical examination
- Inform travellers of action to take if they become ill
- Yellow fever vaccination
- Arrangements for isolation/ quarantine

Public Health Passenger Locator Form

This form will help a public health official to contact you if you could have been exposed to a serious communicable disease on board. **Providing them READABLE and full contact data is crucial.** Your information is intended to be held in accordance with applicable laws and used only for public health purposes. ***Thank you for helping us to protect your health.***

Flight (ex: AC298) | Seat N° | Arrival date (yyyy / mm / dd)

Family Name | First Name

Mobile + | Home or Office +

E-mail address

Airline measures (IHR and SARPS)

- IATA Guidelines on suspected communicable diseases for all staff involved (cabin crew, passenger agents, cleaning crew, maintenance crew, etc.)
- IATA Emergency Response Plan, Public Health Emergency, A Template for Carriers
- Airline procedures for aircraft disinsection and aircraft disinfection
- Airline procedure for PAN-ATM
- Request for passenger contact tracing

APPENDIX 2. PASSENGER MANIFEST

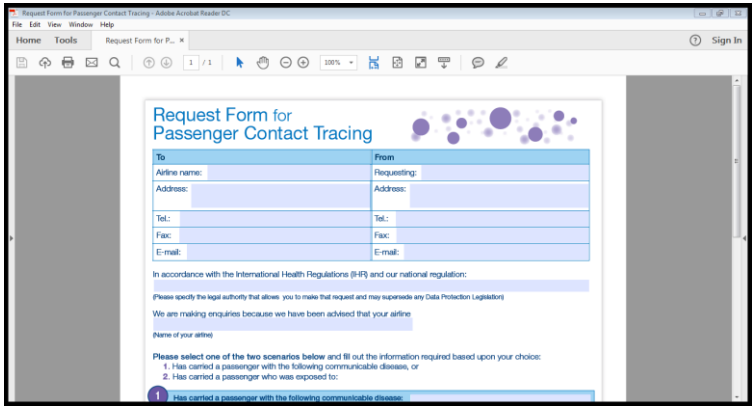
PASSENGER MANIFEST

Operator.....

Marks of Nationality and Registration* ..... Flight No. ..... Date .....

Point of embarkation..... (Place) Point of disembarkation ..... (Place)

Surname and initials	For use by operator only	For official use only



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Notification of disease on board an aircraft

ICAO Aircraft General Declaration
- Declaration of Health (signs/symptoms)
(ICAO Annex 9, Appendix 1 & IHR (2005) Annex 9)

- Aircraft Call sign (ID)
- Dep. Aerodrome
- Dest. Aerodrome
- Est. Time Arrival
- No persons on board
- No of suspect cases
- Nature of health risk

Voice or data link

Voice or data link

- Airport Operator
- Public Health Authority
- Other agency(ies)

Aircraft Operator
(or handling agency) at destination aerodrome incl. ground-based medical services provider (if available)

Voice or data link

- Airport Operator
- Public Health Authority
- Other agency(ies)

Via local procedure
(Aerodrome Emergency Plan)

Via local procedure
(Aerodrome Emergency Plan)

Voice or data link e.g. AFTN*

Destination Aerodrome
Air Traffic Services

Voice or data link e.g. AFTN

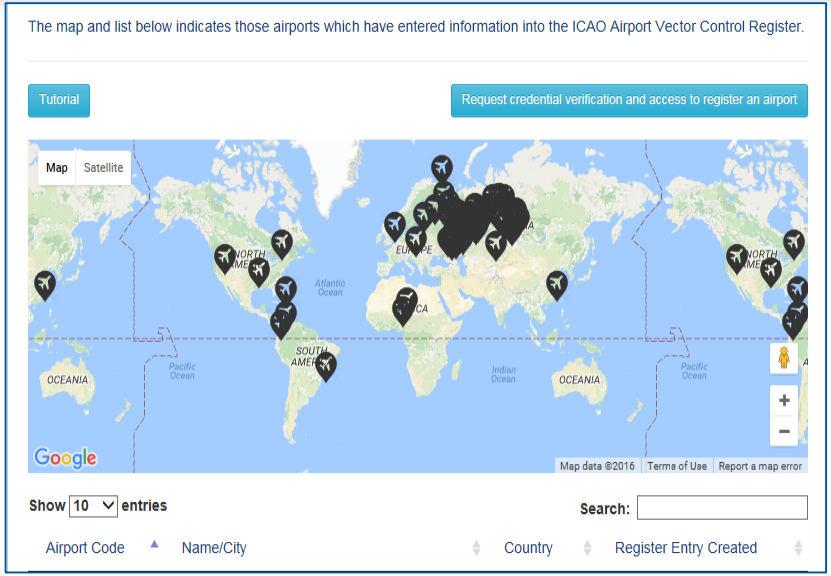
Departure
Aerodrome Air
Traffic Services

Air Traffic Controller

*AFTN = Aeronautical Fixed Telecommunication Network

Airport Vector Control Register

- Voluntary information sharing for risk assessment concerning vector control practices
- Managed by ICAO and shared with:
  - Civil Aviation Authorities
  - Airports
  - General Public



www.icao.int/crr/Pages/Airport-Vector-Control-Register.aspx

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Airport Vector Control Register

Level 1 - Public:

This report will allow you to see the **location** of airports that have completed the Vector Control Measures Registration.

(Please refer to *geolocation example*).

Level 2 - Airports and respondents:

You will be able to access **statistics collected** from the data received.

Level 3 - States:

You will be able to access **geolocations, statistics** and **detailed analytical reports for each airport.**

Airport Vector Control Register

Aiport vector control involves taking control measures (such as spraying, trapping, etc) against vectors , wich IHR defines as "an insect or other anmial which normally transports and infectious agent that constitutes a public health risk" with the aim of keeping a vector free area within the 400 meters aiport perimeter as stated in the IHR.

Tutorial | Request credential verification and access to register an airport

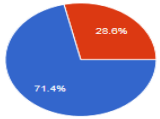
Show 10 entries Search:

Airport Code	Name/City	Country	Registry Created
CYUL	Pierre Elliott Trudeau Intl - Montreal	Canada	4/5/2016 7:10:08
CYYZ	Lester B Pearson Intl - Toronto	Canada	4/5/2016 10:26:26
KJFK	Kennedy Intl - New York	USA	4/6/2016 13:44:49
LFPO	Orly - Paris	France	4/5/2016 19:04:09
LSGG	Geneva - Geneva	Switzerland	4/8/2016 12:12:18
LSZH	Zurich - Zurich	Switzerland	4/6/2016 7:28:32

Showing 1 to 6 of 6 entries Previous 1 Next

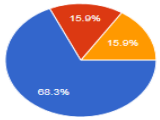
Vector control measures

6. Is the airport a designated airport in terms of the International Health Regulations (IHR) ?



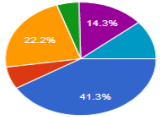
Yes	45	71.4%
No	18	28.6%

7. Does this airport have a vector control programme?



Yes	43	68.3%
No	10	15.9%
Don't know	10	15.9%

8. Who is the "Competent Authority", as defined in IHR, that is responsible for ensuring the implementation of a vector control program at this airport ?

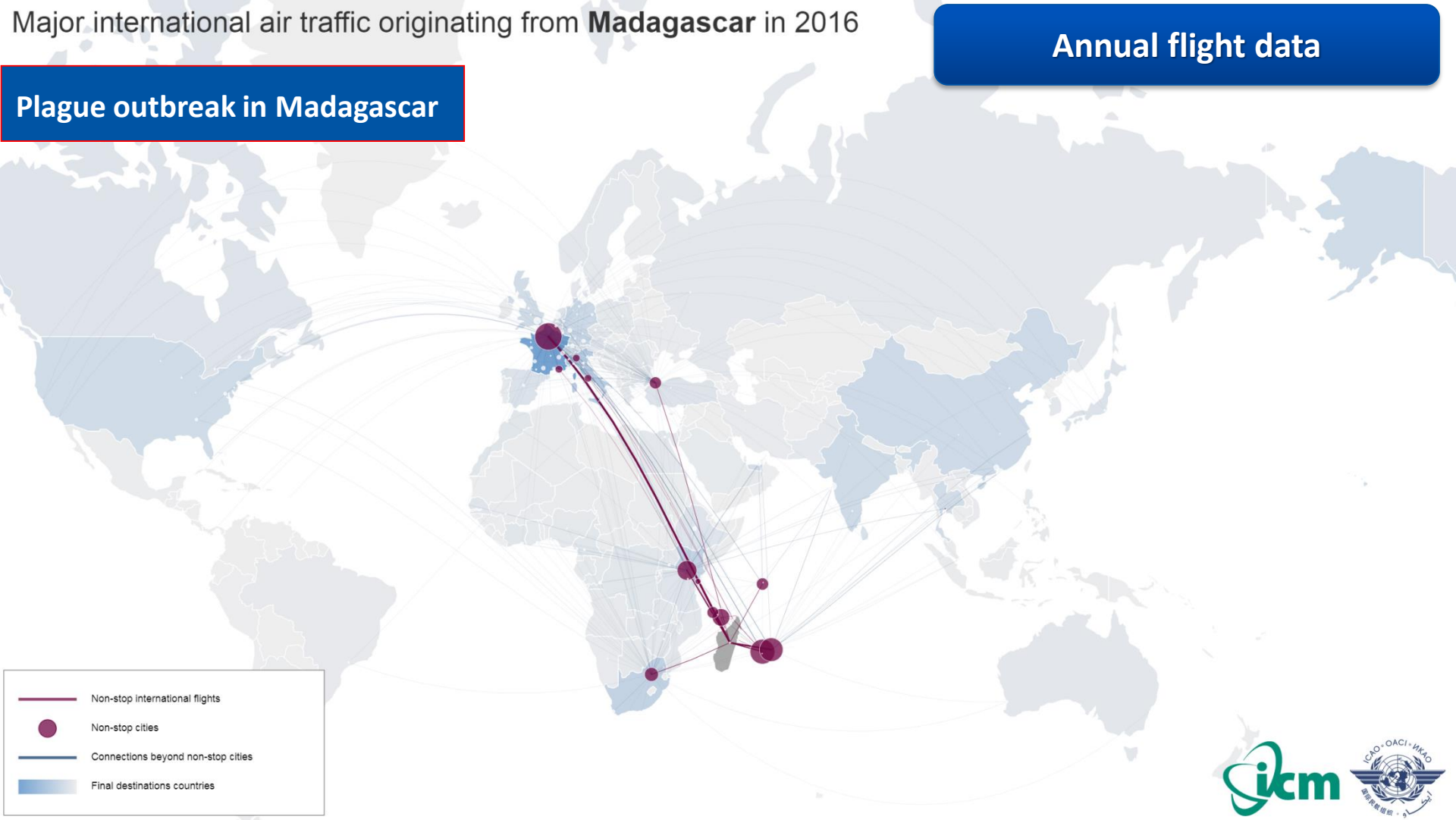


National Department of Health	26	41.3%
National Department of Transport	4	6.3%
Local municipality Health Department	14	22.2%
Non governmental - Managed by Private Contractor	3	4.8%
I don't know	9	14.3%
Other	7	11.1%

Major international air traffic originating from **Madagascar** in 2016

Annual flight data

Plague outbreak in Madagascar



Plague Madagascar

Origin Airport	Transfer 1 Airport	Transfer 2 Airport	Destination Airport	Average weekly passengers	Fraction	Rank
Ivato - Antananarivo			Sir Seewoosagur Ramgoolam - Port Louis	685	5.6%	1
Ivato - Antananarivo			Charles de Gaulle - Paris	632	5.2%	2
Ivato - Antananarivo			Roland Garros - St Denis	626	5.1%	3
Ivato - Antananarivo			Prince Said Ibrahim - Moroni	270	2.2%	5
Ambotovy			Dzaoudzi Pamandzi	189	1.5%	12
Ivato - Antananarivo			Paris-Orly	166	1.4%	15
Ivato - Antananarivo			Dzaoudzi Pamandzi	163	1.3%	16
Fascene - Nosy Be			Roland Garros - St Denis	157	1.3%	18
Ivato - Antananarivo			OR Tambo - Johannesburg	141	1.2%	22
Ivato - Antananarivo			Jomo Kenyatta - Nairobi	131	1.1%	24
Toamasina			Roland Garros - St Denis	127	1.0%	25
Fascene - Nosy Be			Dzaoudzi Pamandzi	113	0.9%	29
Ivato - Antananarivo			Seychelles - Mahe Island	112	0.9%	30
Arrachart			Dzaoudzi Pamandzi	104	0.9%	31
Ivato - Antananarivo	Seychelles - Mahe Island		Charles de Gaulle - Paris	104	0.9%	32
Fascene - Nosy Be			Leonardo da Vinci–Fiumicino - Rome	98	0.8%	35
Ivato - Antananarivo	Sir Seewoosagur Ramgoolam - Port Louis		Hong Kong Kai Tak	96	0.8%	37
Fascene - Nosy Be			Malpensa - Milan	92	0.8%	38
Fascene - Nosy Be	Roland Garros - St Denis		Charles de Gaulle - Paris	89	0.7%	39
Ivato - Antananarivo			Marseille Provence	77	0.6%	41
Ivato - Antananarivo	Charles de Gaulle - Paris		Marseille Provence	75	0.6%	42

Flight Information App

Real time data as from 21 Aug 2017

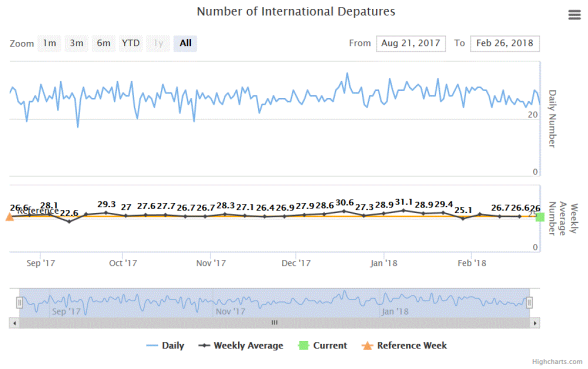
General Trends

Select a State or Territory: Nigeria

Select a reference week: 2017-08-21

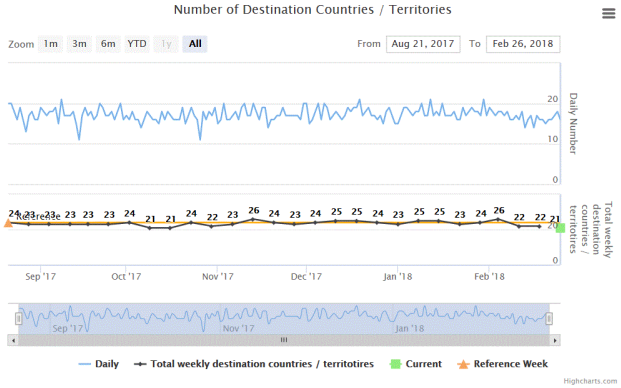
Departures

(2017-08-21 -- 2018-02-26)



Destination Countries / Territories

(2017-08-21 -- 2018-02-26)



Details on Departures and Destinations

Proceeding 7 days

(2018-02-20 -- 2018-02-26)

Show 10 entries

Destination Country / Territory	Departures (7 days)	Growth (Compare to Reference Week)
UAE	24	+140.0%
UK	22	+15.8%
Ethiopia	19	-9.5%
Egypt	16	-11.1%
Turkey	14	+16.7%
France	11	+10.0%
Germany	9	-18.2%
Ghana	7	-30.0%
Netherlands	7	+16.7%
South African Rep	7	+16.7%

Showing 1 to 10 of 25 entries Previous 1 2 3 Next

Show 10 entries

Destination Airport	Departures (7 days)	Growth (Compare to Reference Week)
EGLL / Heathrow / UK	21	+10.5%
HAAB / Bole Intl / Ethiopia	19	-9.5%
OMDB / Dubai Intl / UAE	18	+200.0%
HECA / Cairo Intl / Egypt	16	-11.1%
LTBA / Ataturk / Turkey	14	+16.7%
LFPG / Charles-De-Gaulle / France	10	0
EDDF / Frankfurt/Main / Germany	9	-18.2%
DGAA / Kotoka Intl / Ghana	7	-30.0%
EHAM / Schiphol / Netherlands	7	+16.7%
FAOR / O.R. Tambo Intl / South African Rep	7	+16.7%

Showing 1 to 10 of 32 entries Previous 1 2 3 4 Next

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Flight Information App

Indicators Comparison

Select a day

2018-02-26

Compare with the week start from

2018-02-19

Compare

The Day **2018-02-26** compare to the week start from **2018-02-19**

Country or Territory Comparison

Show 10 **entries**

Arrival Country or Territory	Flight Number	
UK	3	↑(+0)
Ethiopia	3	↑(+1)
UAE	3	↑(+0)
Germany	2	↑(+0)
Egypt	2	↑(+0)
France	2	↑(+0)
Turkey	2	↑(+0)
Togo	1	↑(+1)
Ghana	1	↑(+0)
Ivory Coast	1	↑(+1)

Showing 1 to 10 of 16 entries

Previous 1 2 Next

	Country or Territory Number 16 (+0)
	Flight Number 26 (+1)

NOTAMS Information

tags for plague: plague, bubonic, pneumonic, Yersinia pestis (bacterial species)
tags for ebola: ebola, haemorrhagic, fever, Filoviridae
tags for yellow fever: yellow fever, virus, mosquito
tags for diseases in general: contagious, disease, infection, outbreak, epidemic, bacteria, virus, protozoa
tags for diseases + aviation: quarantine, isolate, infect

A0118/18 - GMFF (Morocco)

AERODROME

Period: 2018-02-26T00:00:00.000Z - 2018-05-27T00:00:00.000Z

Q-Code (EAHW):

BUILDING WORK OF PARKING STAND ISOLATED AT 350M EAST OF SHOULDER STRAP L PRESENCE PERSONS AND EQPT. CAUTION RECOMMENDED. CREATED: 26 Feb 2018 10:29:00 SOURCE: GMMMYNYX

A0070/18 - FLFI (Zambia): Not listed Plain language

FIR

Period: 2018-02-24T00:00:00.000Z - 2018-05-24T00:00:00.000Z

Q-Code (XXXX): Other Information | Other Information | Not listed | Plain language | Other

IN VIEW OF THE ONGOING EBOLA OUTBREAK,ZAMBIA CIVIL AVIATION AUTHORITY IS REQUESTING ALL AIRMEN TO REPORT MEDICAL STS OF THEIR PAX FOR ALL INBOUND FLIGHTS AND TO COMPLY WITH HEALTH SCREENING OF PAX ENTERING THE ZAMBIAN AIRSPACE. CREATED: 24 Feb 2018 06:29:00 SOURCE: FLKKYNYX

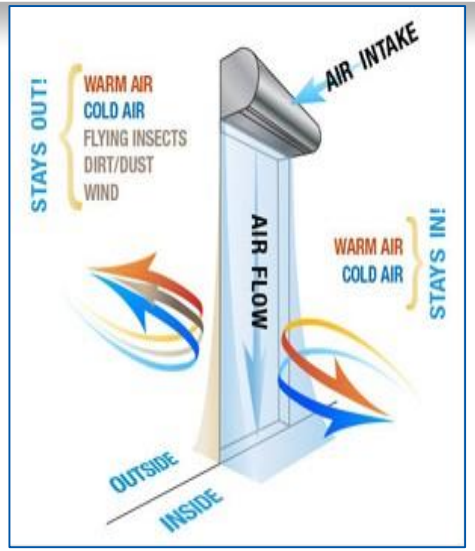
ICAO Working Groups

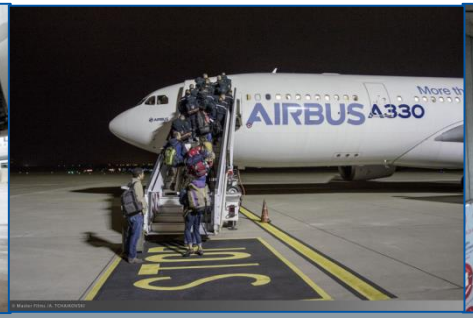
Outcome: WP/84
Engage with the World Health Organization and engaging the CAPSCA programme to: • Develop performance-based criteria to evaluate all disinsection methods, including non-chemical means of disinsection • Develop recommendations regarding non-chemical disinsection methods • Develop guidance on the components of a scientifically based risk assessment model for Contracting States to use in determining whether to employ vector control measures that include but are not limited to aircraft disinsection • Resolution accepted by Assembly

Outcome: WP/199
Conduct research on the safety-related and communicable disease aspects of air ambulance operations; Conduct feasibility of developing air ambulance SARPs and a data collection and analysis system

Airport/ Aircraft Disinsection

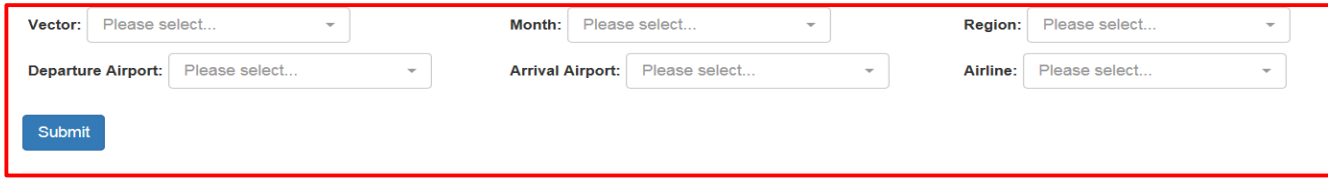
- Is it necessary ?
- Is it effective ?
- Chemical ?
- Non-chemical ?
- Performance standards ?





Vector Risk Assessment Tool

- Assess residual risk for spread of vectors at an arrival airport
- Methodology
  - Step-based approach different layers
  - Prevailing risk at airport e.g. vector distribution maps
  - Risk modification components e.g. vector control at airport
  - Request departure airport for additional information
  - Request operator for additional measures e.g. aircraft disinsection
  - Determine acceptability to the State - State sovereignty and national requirements
  - Promote dialogue between States
  - Introduce mitigation measures at the arrival airport



Vector Risk Assessment Tool

#	1. Region Indicators
1.1	Is the region where the airport is located known to have targeted vectors based on vector map (http://vectormap.nhm.ku.edu/vectormap)
1.2	Is it the relevant season and climate of the targeted vector in the region where the airport is located?
1.3	Is the region where the airport is located under any vector-borne disease advisory and/or the WHO published list where disinsection or vector control are recommended?
1.4	Has there been a vector-borne disease outbreak in this region in the past?
1.5	What is the volume of flights in the region where the airport is located based on the Air Connectivity Index[1]?
1.6	Is the absence of targeted vectors confirmed through the vector surveillance programs?

#	2. Surveillance Indicators
2.1	Does the airport vector surveillance program use vector collection devices/traps that are approved by the scientific community as being appropriate for the targeted vector?
2.2	Is the vector surveillance conducted by trained airport/government personnel or approved contracted services?
2.3	Are the results of the vector surveillance used to develop and implement airport vector control programs?
2.4	Are the results and associated risks from vector surveillance communicated to users and management of the airport?

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Vector Risk Assessment Tool

#	3. Departure Airport Indicators
3.1	Does the departure airport have routes to non-endemic regions of targeted vectors or international operations that include:
	3.1.1 Scheduled passenger operations?
	3.1.2 Cargo operations?
	3.1.3 Non-Scheduled passenger operations?
	3.1.4 Military or state operations?
3.2	Does the airport provide approved chemical or mechanical disinsection services for aircrafts?
3.3	Are the jetway/walkway/stairway/door to the aircraft closed when it is not in service?
3.4	Are the gates/jetways/walkways/stairways equipped with mechanical disinsection capabilities?
3.5	Is the departure airport able to provide minimum distance of 400m from the nearest Point of Entry (PoE) or designated parking position that can isolate aircrafts from vector threats?
3.6	Is the airport vector control program implemented and managed in accordance to ongoing presence of target vectors and environmental change?

#	4. Arrival Airport Indicators
4.1	Is the arrival airport able to provide minimum distance of 400m from the nearest Point of Entry (PoE) or designated parking position if arriving aircraft may be carrying possible infectious agents or vectors in reference to IHR (2005) Annex 5.1?
4.2	Is the arrival airportâ€™s vector control program implemented and managed in accordance to possible targeted vectors threats and environmental change?
4.3	Are there alternative airports in the region if diversion is necessary as per IHR (2005) Annex 5.7?
4.4	What score did the region of the arrival airport receive for â€œPoE.1 Routine capacities are established at PoEâ€ in reference to WHOâ€™s IHR (2005) Joint External Evaluation?

Vector Risk Assessment Tool

#	5. Conveyance Indicators
5.1	Does the operator utilize residual disinsection consistent with WHO or government regulations?
5.2	Does the operator have a guideline or policy for cargo and luggage vector-control practices?
5.3	Does the operator leave aircraft entry points open when airframe is parked and not in preparation for operation?
5.4	Does the operator use self-closing screens for passenger entries?
5.5	Does the operator use maintenance facilities at the departure airport? IF yes:
	5.5.1 Does the maintenance facility utilize chemical or mechanical disinsection when servicing the aircraft?
	5.5.2 Does the maintenance facility conduct repair in a closed hangar?

Thank you for your attention

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